Object Identifier	Main	Reqmt	TDD Block
T-HARM-295	CHAPTER 13 MISSION PLANNING TOOLS - TAMPS AND TEAMS (U)		
T-HARM-296	13.0 INTRODUCTION (U)		
T-HARM-297	(U) HARM mission planning is currently supported by three USN/USMC systems: the Tactical Aircraft Mission Planning System (TAMPS), the Tactical EA-6B Mission Support System (TEAMS), and the Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES). Each of these systems supports specific Navy/Marine platforms, as follows:		
T-HARM-298	TAMPS FA-18		
T-HARM-299	TEAMS EA-6B		
T-HARM-300	TERPES EA-6B (USMC)		
T-HARM-301	(U) In addition, the USAF uses the Air Force Mission Support System (AFMSS) to plan F-16 HARM Targeting System (HTS) missions.		
T-HARM-302	13.1 TAMPS DESCRIPTION (U)		
T-HARM-303	(U) The TAMPS system provides automated, interactive mission planning for USN/USMC tactical aircraft (TACAIR) units. TAMPS		
T-HARM-530	stores or has access to digital databases of mission planning information, including map, terrain, location, threat, electronic intelligence (ELINT), aircraft and weapon system performance.	Requirement	2.1
T-HARM-531	TAMPS provides a step-by-step approach to the mission planning process: the user chooses the various mission parameters; TAMPS retrieves, calculates, and displays the resulting mission-specific information. TAMPS		
T-HARM-532	generates hard copy and electronic data, including briefing materials, inflight guides, and digital data for direct transfer to the weapon system.	Requirement	3.10
T-HARM-304	(U) TAMPS provides planning support for determining threat, mission routes, threat locations, engagement zones, fuel requirements, and weapon system employment plans. TAMPS outputs include mission charts, kneeboard cards, radar predictions, and electronic upload data for the E-2C and FA-18.	Requirement	3.10
T-HARM-305	(U) TAMPS consists of a core operating system and several weapon system specific Mission Planning Modules (MPM). The TAMPS modules include planning information for most air-to-ground weapons, including the HARM missile. TAMPS is installed aboard all US Navy aircraft carriers		

	(CV/CVN), and at shore installations (squadron or USMC garrison).		
T-HARM-306	13.1.1 TAMPS SOFTWARE (U)		
T-HARM-307	(U) The TAMPS software is divided into modules. The modular architecture provides for the various planning functions while maintaining consistent displays, user interfaces, and common databases. The TAMPS Core is actually a set of modules itself, which control system operations, provide common planning functions, and provide MPM interface. The MPMs are developed independently to support the planning requirements for various aircraft and weapon systems. The TAMPS software includes the following modules:		
T-HARM-308	Core ? Displays/Environment ? User Interface ? Databases - Map, Terrain - ELINT, Imagery - Aircraft Performance Data ? Mission Planning ? Outputs MPMs (v6.2K) ? F/A-18 ? HARM ? E-2C ? FAMP (Forward ? Aircraft ? SLAM (Standoff ? JSOW (Joint Star ? JDAM (Joint Dire		
T-HARM-309	13.1.2 DATABASES (U)		
T-HARM-310	(U) TAMPS uses a number of databases provided by National Agencies. These databases provide TAMPS with map, terrain, and threat information.		
T-HARM-311	13.1.3 OUTPUTS (U)		
T-HARM-312	(U) Aircrew planner products include the following: Mission reports Strip charts Kneeboard cards Radar predications Aircraft data loads (MU downloads) (U) Of the above outputs, the first four are color hardcopy reports. Aircraft data loads are output as digital information to a data transfer device for direct loading into an aircraft, avionics or weapon system (e.g. the F/A-18 Memory Unit).	Requirement	3.10
T-HARM-319	13.2 TAMPS HARM MISSION PLANNING (U)		
T-HARM-320	(U) The HARM mission planner enters the HARM Mission Planning Module (HARM MPM) and		
T-HARM-536	constructs/displays individual HARM missions. The user	Requirement	3.7, 3.10

	selects the type of mission, the target, expected launch profile, and launch location.		
T-HARM-537	TAMPS guides the user through the choices.		
T-HARM-538	The user can then select or edit HARM threat files/engagement parameters, and download the information to the Memory Unit (MU). The mission planner can also print kneeboard cards and overlay the missile shot onto a variety of charts.	Requirement	3.7, 3.10
T-HARM-321	(U) An overview of the TAMPS mission planning process follows. The description provides general, non-specific information demonstrating what inputs the planner needs to make to the TAMPS system, what information must be acquired elsewhere, and what TAMPS provides as output. Further information on the HARM MPM can be found in the HARM MPM User's Manual.		
T-HARM-322	13.2.1 PREPARATION FOR ENTERING THE HARM MPM (U)		
T-HARM-323	(U) Before beginning planning on TAMPS, the aircrew should have a firm idea of the mission goals and constraints. TAMPS uses the following information to provide data products. While the HARM MPM will provide options, it is best to think through this mission information before entering TAMPS.		
T-HARM-324	Desired Electronic Order of Battle (EOB) Aircraft Configuration Target (emitter and location) Type of shot desired Aircraft Launch parameters/location Output desired	Requirement	2.1
T-HARM-330	(U) Further, one should be familiar with the following employment considerations:		
T-HARM-331	EOB level of threat Density of local electromagnetic environment Location/proximity of blue/gray emitters Current intel and battle damage assessment (BDA)	Requirement	2.1, 2.2
T-HARM-335	Operational constraints/rules of engagement (ROE)	Requirement	1.7
T-HARM-336	Lessons learned	Requirement	2.1, 2.2
T-HARM-337	(U) Finally, TAMPS doesn't supply all the information the mission planner needs. Aircrew should have available the required tools to fill the gaps in HARM MPM planning, specifically:		
T-HARM-338	Current detection range information	Requirement	2.1
T-HARM-339	Intel on enemy emitter/system employment	Requirement	2.1

T-HARM-340	13.2.2 HARM MPM DESCRIPTION (U)		
T-HARM-341	The HARM MPM is composed of nine unique options:		
T-HARM-342	HARM Shots Sect 13.2.3.1		
T-HARM-343	MME Data (Manually Modified ELINT) Sect 13.2.3.2		
T-HARM-344	MNT Data (Manual New Threat) Sect 13.2.3.2		
T-HARM-345	UTC Mission (User-defined TOO Class) Sect 13.2.3.2		
T-HARM-346	Import / Export HARM Data Sect 13.2.3.3		
T-HARM-347	HARM ELINT Browser Sect 13.2.3.4		
T-HARM-348	Build HARM MU File Sect 13.2.3.5		
T-HARM-349	HARM Kneeboard Cards Sect 13.2.3.5		
T-HARM-350	HARM Reports Sect 13.2.3.5		
T-HARM-351	These options are used to perform HARM shot planning, manage manual threat ELINT data, and produce hardcopy and digital output (aircraft MU load) for briefing and cockpit use.		
T-HARM-352	HARM MPM FUNCTIONALITY		
T-HARM-353	The mission name is the identifier for the active mission, selected from the existing entries in the HARM Missions database. The mission name should be unique for the current planner logged in to the TAMPS workstation. The mission is the basic planning unit in the HARM MPM.		
T-HARM-354	HARM MPM MISSION DEVELOPMENT (U)		
T-HARM-355	The HARM MPM allows for planning and evaluating the five shot modes of HARM employed via the F/A-18 Command Launch Computer (CLC). These modes are Pre-briefed (PB), Pre-briefed Equations of Motion (PB EOM), Target of Opportunity (TOO), TOO EOM, and Self Protect (SP).		
T-HARM-356	13.2.3.1 HARM SHOTS (U)		
T-HARM-357	The HARM Shots option for the HARM MPM is used to plan a new HARM shot (launch) or to manage an existing HARM shot		

	for the currently active mission. Each mission can contain multiple shots against different targets. A directory of the existing shots in the currently active mission is displayed on the HARM Shots window.		
T-HARM-358	Step 1. Enter the HARM MPM.		
T-HARM-359	(U) From the main TAMPS menu, select Mission Planning - Weapons - HARM.		
T-HARM-360	Step 2. Select HARM Missions.		
T-HARM-361	(U) The user will be required to select an existing mission or create a new mission that contains, among other things, an Operational Area (OPAREA) and ELINT file. The aircraft configuration for a new mission is also set here.		
T-HARM-362	Step 3. Select the EOB display.		
T-HARM-363	(U) From the main HARM Mission Planning menu, select Threat - Order of Battle - EOB. The EOB is broken up into classes. Select one or more class to display.		
T-HARM-364	Step 4. Select a HARM Shot.		
T-HARM-365	(U) The HARM Shots window allows the planner to open an existing HARM shot Launch record or create a New Shot. The window also provides options to display the 90% Probability of Hit (POH) Range Rings, 90% POH Footprint, and Field of View (FOV) - depending on the mode selected.		
T-HARM-366	(U) New Shot: Select New button. Opens the New Shot dialog box.		
T-HARM-367	Step 5. Launch Record.		
T-HARM-368	U) Buttons on the launch record allow access to Missile Mode, Display and Ambiguity Analysis options.		
T-HARM-369	(U) Mode. These radio buttons allows the planner to change the missile mode. TAMPS supports planning of the following missile modes:		
T-HARM-370	Prebrief (PB)		
T-HARM-371	Target of Opportunity (TOO)		
T-HARM-372	Self Protect (SP)		
T-HARM-373	PB Equations of Motion (PB EOM)		
T-HARM-374	TOO EOM		
T-HARM-375	Fields on the Launch Record window available for editing include:		

T-HARM-376	**Target Information**	data pertaining to	Requirement	2.1, 3.7
	Name	name of the target		
	Select	used to select the		
	Ref No	reference number which is obtained ELINT theater wa Mission was creat		
	Select	Selects the appro the shot.		
	Latitude / Longitude	latitude / longitud		
	Elevation	Elevation of the ta (Digital Terrain E planner.		
	Aimpoint Latitude/Longitude	latitude / longitud MPM calculates a aimpoint location values default to t possible to chang		
	Aimpoint Elevation	elevation of the ai DTED (Digital Te by the planner.		
	Required HARM TOT	the planner entere TOT allows HAR		
	Aircraft Information	data pertaining to		
	Latitude / Longitude	latitude / longitud launching the mis		
	Altitude	altitude of the mis		
	Mach	speed of the missi		
	TAS	derived from ente		
T-HARM-377	(U) The Launch record window also allows display of the 90% POH Range Rings. The rings are displayed around the target position. The three rings represent minimum and maximum level launch range, and maximum launch range with aircraft pull-up. Choose a launch position between the			

	minimum and one of the two maximums. This provides for a launch within the guided envelope of the missile. The rings can be expanded/contracted as desired by changing the launch altitude/mach. (Further discussion of 90% POH Range Rings and other display aids are presented later).		
T-HARM-378	(U) Target information can be entered manually, by selecting an emitter on the map, or by entering the BE (Basic Encyclopedia) number of the desired target.	Requirement	2.1, 3.7
T-HARM-379	(U) The Launch Record displays the target and aircraft information entered and allows the planner to modify the data. A Calculated Results button uses these inputs to provide the following information:		
T-HARM-380	HARM Shots Calculated Results:		
T-HARM-381	**Aimpoint Range** distance from the launch point to th **Aimpoint Bearing** bearing from the launch point to the depending upon Planner set prefere **Time of Flight** total time of flight of the missile fro **Seeker Turn On** time interval between missile launc becomes active (turns on). **Seeker Range to Target** distance from the seeker turn on poi **Required Launch Time** calculated launch time is provided i **A/C Pull-up Req** aircraft pull-up required (in degrees **A/C Radar Horizon** radar horizon from the aircraft, base **Missile Max. Range** maximum 90% POH missile range parameters provided. **Missile Min. Range** minimum 90% POH missile range l parameters provided. **Aircraft Heading** heading of the aircraft when the airc launch. Either True or Mag depend	Requirement	3.7
T-HARM-382	(U) New shots are always created with mode set to PB. For shots in other modes, enter target and aircraft information in the Launch Record window. Change the Mode via the selection buttons.		
T-HARM-383	(U) Display. The Display buttons provides map overlays of HARM planning aids. Each display is available only with	Requirement	3.7

	the applicable missile modes, as follows: Display — Modes 90% POH Range Rings — PB, PB EOM, TOO EOM 90% POH Footprint — EOM, SP FOV — All except SP (FOV at launch for TOO, FOV at trip for PB/EOM)		
T-HARM-389	(U) 90% POH Range Rings. (PB, EOM) These rings provide minimum and maximum HARM launch ranges to achieve a 90% Probability of Hit. There are three rings displayed, centered on the intended target. Minimum - level launch Maximum - level launch Maximum - aircraft pull-up The size of the Range Rings vary as a function only of missile mode, aircraft altitude, and aircraft speed. The 90% POH Range is essentially the HARM kinematic envelope for a functioning, guiding HARM. The rings do not consider HARM's capability to acquire or track a target.	Requirement	3.7
T-HARM-394	(U) The HARM MPM now addresses guidance and lethality considerations. The HARM MPM displays support analysis of HARM guidance and lethality: 90% POH footprints HARM Missile FOV footprints HARM Targeting Charts	Requirement	3.7
T-HARM-398	(U) 90% POH Footprint. (PB EOM, TOO EOM, SP) The 90% POH Footprint is used to verify off-axis shots. Two curves are displayed: the level launch and aircraft pull-up footprints. Footprint curves are referenced to the selected launch position. The curves show the ground area ("footprint") to which a working, tracking HARM could guide - from the selected launch position and in the selected mode - with a 90% POH.	Requirement	3.7
T-HARM-399	(U) The difference between range rings and footprints should be noted: the planner uses range rings to work backward from the target location to an acceptable launch range (with a 90% POH). Having determined a launch point through use of range rings or other method, the planner can use the footprint to determine other aspects of the shot. Information that can be culled from the footprints is: - Trip Point - Capability of engaging non-colocated flex targets. - Allowable off-axis engagement (i.e., acceptable launch headings at selected launch point)	Requirement	3.7

	- MANUAL deconfliction of nearby Blue/Grey emitters (U) Like range rings, however, the footprint is emitter-independent. The curves do not consider HARM's capability to acquire or track a particular target; only to where a HARM can lethally fly with good track on any target - based on the launch parameters and mode. The Targeting rings provide engagement information.		
T-HARM-405	(U) Field of View Footprint. (PB, EOM, TOO). The FOV Footprint displays the area on the ground in which the HARM seeker is actively looking for targets. The FOV Footprint display gives two different views, depending on mode. For modes with a seeker turn-on ("Trip") Point (PB, EOM), the FOV Footprint display equates to the FOV footprint at trip. For TOO, the display shows the predicted FOV footprint at the launch point (from the aircraft wing). A summary of the display functions is shown in Table 13-2.	Requirement	3.7
T-HARM-406	(U) Calculated Results. This button on the launch record calculates various values based on the required Launch Record entries. The calculated results and the entries on which they are based are shown in table 13-3.		
T-HARM-407	Table 13-2. Launch Record Displays Display / HARM Modes / Description / Notes 90% POH Range Rings / PB, PE EOM, TOO EOM / Range circles: Min launch, level Max launch, pull-up / HARM assumed to be tracking/ guiding from trip. 90% POH Footprint / PB EOM, TOO EOM, SP* / Ground footprint curves: Max level launch Max with pull-up / HARM assumed to be tracking/ guiding from trip/ launch. FOV Footprint / PB, PB EOM, TOO EOM / FOV ground footprint at trip. / TOO / FOV ground footprint from launch point. UNCLASSIFIED	Requirement	3.7
T-HARM-408	Table 13-3. Calculated Results Calculated Results / Launch Record Information Missile Max Range (pull-up) Missile Min Range A/C Radar Horizon / Launch position Launch altitude, mach A/C Pull-up Required Aimpoint Range/Bearing Aircraft Heading (PB only) A/C Heading Valid (TOO EOM only) Time-of-Flight (TOF) Seeker Turn On Seeker Range to Target (Aimpoint) Required Launch Time / Launch position Launch altitude, mach Aimpoint location, elevation UNCLASSIFIED	Requirement	3.7
T-HARM-410	(U) Ambiguity Analysis. The HARM MPM will perform an Ambiguity Analysis on the target emitter (except SP) entered in the Launch Record. TAMPS uses the information in the Reference Number field; this field must contain a valid HARM ELINT reference number, Manually Modified ELINT (MME) number, or a Manual New Threat (MNT) number. Ambiguity Analysis cannot be run on a blank or 0 Ref No, or on a Block II Manual Threat.	Requirement	3.7, 2.2
T-HARM-411	(U) Ambiguity Analysis is performed on map objects within an area specified by the planner, either FOV or User Defined. The analysis is performed against parametrics of specific, located objects within the designated area. The only objects that are considered are those displayed on the map. Thus, the planner must carefully select which classes of threats to display before performing this analysis.	Requirement	3.7, 2.2
T-HARM-412	(U) Field of view analysis is available only when the FOV is displayed on the map. Again, the FOV displayed represents the nominal FOV footprint at seeker trip for PB, PB EOM, and TOO EOM modes. For TOO, the display shows the FOV	Requirement	3.7, 2.2

	footprint of the HARM carried on the aircraft.		
T-HARM-413	(U) Selecting Ambiguity Analysis opens the Ambiguity Analysis dialog box. Options are as follows: - FOV/User-Defined area - Include Secondary - Include Tertiary - Include Pulse Width - Historical - HARM ELINT	Requirement	3.7, 2.2
T-HARM-420	(U) FOV/User-Defined sets the area in which map objects will be considered. Include Secondary/Tertiary performs ambiguity analysis of Primary and Secondary/Tertiary emitters associated with the target Reference Number. Include Pulse Width adds pulse width as a discriminant in the analysis.	Requirement	3.7, 2.2
T-HARM-421	(U) The Historical and HARM ELINT options are under development. Currently, select Historical, deselect HARM ELINT.	Requirement	3.7, 2.2
T-HARM-422	(U) The Ambiguity Analysis Results window displays which emitters in the selected area are parametrically ambiguous with the selected target emitter and, if selected, its Secondary/Tertiary emitters. This window includes a Parametric Data button to display the parametrics of both a selected ambiguous emitter and the target emitter(s).	Requirement	3.7, 2.2
T-HARM-423	13.2.3.2 MME/MNT/UTS DATA (U)		
T-HARM-424	(U) The HARM MPM provides the means for creating various ELINT related files that can be downloaded to the F/A-18 Memory Unit (MU). After one or more of these files is created, they can be assembled into a single file for MU download. The actual download of the HARM MU file to the MU is accomplished via the F/A-18 MPM.	Requirement	3.10.1
T-HARM-425	The HARM MPM has the following options available based on the OFP selected when the currently opened mission file was created: - MME Data. - MNT Data. - UTC Missions.	Requirement	2.1, 3.7
T-HARM-429	The MME/MNT Data option provides the capability to create new MME/MNTs and modify existing MME/MNTs. The currently active HARM mission will determine the current HARM ELINT theater in use. Only those MME/MNTs built for the current theater will be available, since MME/MNTs are ELINT dependent. Some of the available MME/MNTs may have been built for use by another mission, but they will be displayed if the currently active mission has an OFP that is appropriate for MME/MNTs and has the same HARM ELINT	Requirement	3.7, 2.1

	theater specified.		
T-HARM-430	MME/MNT Data Entry		
T-HARM-431	The MME/MNT Data Entry provides the capability to manually modify the data associated with either a new or existing MME/MNT.	Requirement	3.7, 2.1
T-HARM-432	UTC Data Entry		
T-HARM-433	UTC Missions provides the capability to create a UTC (User-defined TOO Class) for downloading to an F/A-18 Memory Unit (MU).	Requirement	3.10.1
T-HARM-434	The HARM ELINT theater database resident in the F/A-18 cockpit HARM CLC contains threat data that is grouped into various pre-defined TOO classes. The planner is allowed to define one additional TOO class for use during flight. A User-defined TOO Class (UTC) for the HARM ELINT can contain up to 75 threat reference number entries. The entries are divided into 5 groups of 15 numbers each - UT1, UT2, UT3, UT4, and UT5. In addition to the number, the planner can specify a link number to group the threats together and a code number to modify the threat's UTC symbol value. The UTC Mission contains the necessary fields and buttons to create / modify the UTC entries.	Requirement	3.7
T-HARM-435	The UTC missions option displays a list of pre-existing UTCs (User-Defined Threat Classes) and provides the capability to create new ones and modify existing UTCs. The currently active HARM mission will determine the current HARM ELINT theater in use. Only those UTCs built for the current theater will be displayed, since UTCs are ELINT dependent. Some of the displayed UTCs may have been built for use by another mission, but they will be displayed if the currently active mission has an OFP that is appropriate for UTCs and has the same HARM ELINT theater specified.	Requirement	3.7
T-HARM-436	The UTC Mission provides the capability to modify the data associated with either a new or existing UTC Mission. The Window is divided into two halves; the lower half contains the selected HARM ELINT theater threat information, the upper half contains the candidate threat reference numbers, MMEs and MNTs for inclusion into the UTC Mission.	Requirement	3.7
T-HARM-437	IMPORT/EXPORT HARM DATA (U)		
T-HARM-438	(U) Import / Export HARM Data provides for backup of planner selected HARM Mission data, UTC mission data, MME data and MNT data. This provides for protection against destruction from machine failure or inadvertent modification. This is also a way to move previously planned mission files from one TAMPS machine to another. The cascading menus gives the planner a choice between Export HARM Data or Import HARM Data.	Requirement	7.1.5, 3.7

T-HARM-439	HARM ELINT BROWSER (U)		
T-HARM-440	(U) The HARM ELINT Browser option provides a means of viewing Reference Numbers and emitters of primary, secondary, and tertiary threat listings contained in the HARM ELINT theaters available for planning HARM mission.	Requirement	3.7
T-HARM-441	HARM PRODUCTS (U)		
T-HARM-442	(U) Output options from the HARM MPM are found in the Outputs pull-down from the main HARM Mission Planning window. The HARM MPM Output offers options used to build a data file for download to an F/A-18 Memory Unit (MU) and to create and print various kneeboard cards and reports related to shot planning, MME/MNT/UTC, and HARM ELINT. The F/A-18 MU is loaded from F/A-18 MPM, but the planner uses the HARM MPM to create the file that is passed to the F/A-18 MPM.	Requirement	3.7, 3.10
T-HARM-443	HARM MPM unique options for Output include:	Requirement	3.7, 310
T-HARM-445	**Build HARM MU File** used to add the following pr MU weapons file: ?? MME Data ?? MNT Data ?? UTC Missions	Requirement	3.7, 3.10
T-HARM-444	**HARM Kneeboard Cards** used to create and print the f ?? Mission Launch ?? MME Data ?? MNT Data ?? UTC Data	Requirement	3.7, 3.10
T-HARM-446	**HARM Reports** used to view an electronic v Reports that are contained ir the fleet: ?? Alphabetical ?? Pre-Briefed ?? TOO ?? Self-Protect ?? Target Parameter ?? TOO Ambiguity ?? HARM Data Imp	Requirement	3.7
T-HARM-447	(U) Generally, the mission planner is interested only in the kneeboard cards and MU load. Kneeboard cards are created for a specific HARM shot, or for a set of MME, MNT, or UTC	Requirement	3.10

	missions.		
T-HARM-448	13.2.4.1 Mission Launch Data (U)		
T-HARM-449	(U) The planner opts for this kneeboard card, then selects a HARM Mission, opening the Mission Launch Data dialog box. Here, the planner highlights a HARM shot for output, presses Send, then formats the kneeboard card product. Format options include portrait/landscape orientation, font, number of copies, and classification.		
T-HARM-450	13.2.4.2 MME/MNT/UTC (U)		
T-HARM-451	(U) All of these products are similar, providing a list of MME/MNT/UTC missions and parameters for use in the cockpit. The planner selects the mission from the list, then the desired MMEs/MNTs/or UTC and presses Send and formats the output.		
T-HARM-452	13.2.4.3 Build Memory Unit (MU) Load (U)		
T-HARM-453	(U) The Build MU Load function provides the capability to electronically transfer MME/MNT/UTC data to an FA-18 Memory Unit. The user selects MME, MNT, and/or UTC and builds a load of previously created MME/MNT/UTC's. Once the desired files have been identified, clicking Send transfers the information to the TAMPS Core Module. From there, the FA-18 module performs the actual MU load.	Requirement	3.10
T-HARM-454	CAUTION		
T-HARM-455	(U) The HARM ELINT file used to build the MU Load on TAMPS must match the HARM ELINT file loaded in the aircraft CLC. This can only be verified manually from the cockpit (SID page).		
T-HARM-456	13.3 TEAMS DESCRIPTION (U)		
T-HARM-457	(U) HARM mission planning for the EA-6B aircraft is accomplished using the TEAMS. There are currently two TEAMS Mission Support Program (MSP) hardware configurations fielded, the TEAMS Workstation and the Technology Upgrade to TEAMS (TUT) station. Software on either system is functionally equivalent and supports HARM mission planning.		
T-HARM-458	(U) TEAMS provides tools to develop EA-6B mission routes and profiles, fuel requirements, threat location and engagement zones, ESM parametric data, ECM employment and techniques, and HARM employment plans. TEAMS outputs mission information electronically onto a Recorder Reproducer Set (RRS) cassette and in various hardcopy formats. The RRS is taken to the aircraft and loaded into the Central Mission Computer (CMC).		

T-HARM-459	(U) Navy and Marine Corps EA-6B squadrons deploy with a TEAMS. HARM mission planning is integrated into the larger Electronic Attack (EA) mission planning features of TEAMS. Due to the nature of EA, TEAMS is usually located within a special squadron TEAMS space aboard the carrier or an equivalent space ashore.		
T-HARM-460	13.4 TEAMS MISSION PLANNING (U)		
T-HARM-461	(U) TEAMS HARM mission planning uses standard HARM ELINT modified for EA-6B HARM Control Panel (HCP) use. In addition to the standard HARM ELINT, TEAMS supports modification of existing ELINT files, and creation of new ELINT files. TEAMS allows the mission planner to link HARM ELINT to various geographical locations and/or emitter parametrics, enabling EA-6B Electronic Countermeasures Officers (ECMO) to rapidly target electronic threats while airborne.		
T-HARM-462	(U) TEAMS will output CLC-formatted data kneeboard printouts to support MNT entries required by the FA--18.		
T-HARM-463	(U) TEAMS HARM targeting uses missile launch parameters and target parameters to calculate the HARM envelope and associated data. These inputs are not dependent on the type of aircraft; therefore, TEAMS may be used to plan a HARM launch off any HARM capable platform.		
T-HARM-464	(U) TEAMS provides the mission planner with preflight HARM targeting information. The mission planner enters aircraft launch parameters, missile mode, and target information; TEAMS calculates and graphically displays a missile Pk envelope and missile time of flight. Altematively, the mission planner can identify a target and have TEAMS graphically display the aircraft launch envelope required. TEAMS also provides missile seeker field of view calculations and possible target ambiguity analysis-both geographically and parametrically. HARM targeting and launch parameters can be printed for briefing or cockpit use.		
T-HARM-465	(U) TEAMS provides postflight reduction of recorded EA-6B On-Board System (OBS) data, including HARM launch information and the electromagnetic environment as detected by the OBS before, during, and after HARM launch/impact. HARM launch data includes: time, aircraft launch parameters, and HARM ELINT handed off to the missile.		
T-HARM-466	(U) Detailed TEAMS mission planning information is found in a EA-6B Weapon System Operators manual.		
T-HARM-467	13.5 ACRONYMS AND TERMS (U)		
T-HARM-468	(U) The following is a list of acronyms and terms used in the Mission Planning Tools Chapter.		

T-HARM-471	Acronym/Term		
T-HARM-472	Definition		
T-HARM-474	AFMSS		
T-HARM-475	Air Force Mission Support System		
T-HARM-477			
T-HARM-478			
T-HARM-480	BDA		
T-HARM-481	Battle Damage Assessment		
T-HARM-483	BE		
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